442

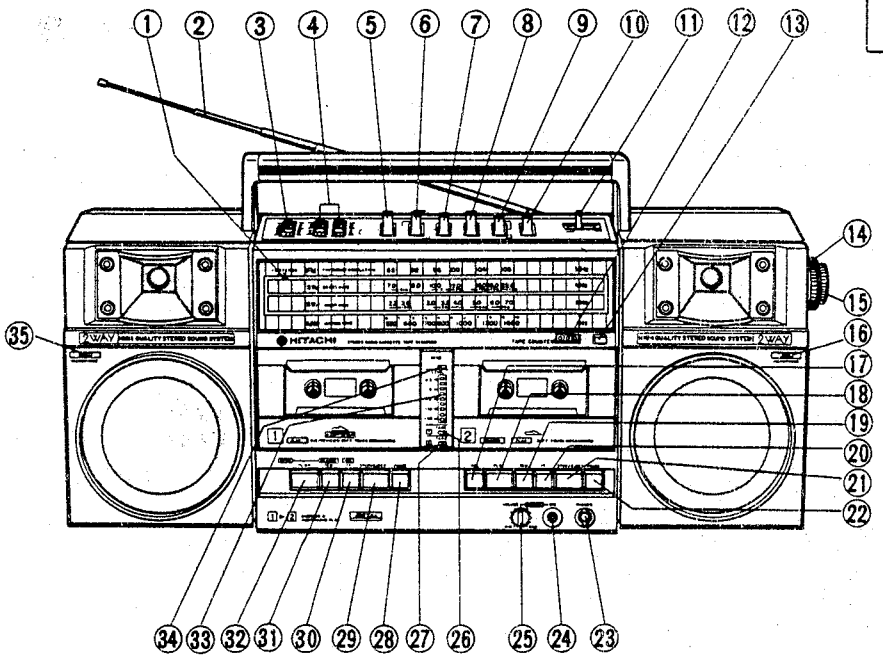
HITACHI

SERVICE MANUAL

TK | No. 2165E

TRK-W57W

GT-50FB chassis [Tape 1]
GT-50FA chassis [Tape 2]



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KEY TO ILLUSTRATIONS

① FM STEREO INDICATOR
② TELESCOPIC ANTENNA (AERIAL)
③ TONE CONTROL
④ VOLUME CONTROLS
⑤ FUNCTION SELECTOR
⑥ SPEAKER/INNER MIC. SELECTOR
⑦ SPSS SWITCH
⑧ LOUDNESS SWITCH
⑨ MODE SELECTOR
⑩ TAPE SELECTOR
⑪ BAND SELECTOR
⑫ TAPE COUNTER
⑬ COUNTER RESET BUTTON
⑭ TUNING CONTROL
⑮ FINE TUNING CONTROL
⑯ BUILT-IN MICROPHONE (RIGHT)
⑰ RECORD BUTTON
⑱ PLAYBACK BUTTON
⑲ REWIND BUTTON
⑳ FAST FORWARD BUTTON
㉑ STOP/EJECT BUTTON
㉒ PAUSE BUTTON
} TAPE [2]

㉓ HEADPHONES SOCKET
㉔ MIXING MICROPHONE SOCKET
㉕ MIXING MIC. VOLUME CONTROL
㉖ TAPE [1] INDICATOR
㉗ TAPE [2] INDICATOR
㉘ PAUSE BUTTON
㉙ STOP/EJECT BUTTON
㉚ FAST FORWARD/CUE BUTTON
㉛ REWIND/REVIEW BUTTON
㉜ PLAYBACK BUTTON
} TAPE [1]
㉝ LEVEL INDICATORS
㉞ SPSS INDICATOR
㉟ BUILT-IN MICROPHONE (LEFT)

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

FM/SW$_2$/SW$_1$/MW RADIO CASSETTE TAPE RECORDER

August 1984 **TOKAI WORKS**

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SAFETY PRECAUTIONS

The following precautions should be observed when servicing.

1. Since many parts in the unit have special safety-related characteristics, always use genuine Hitachi's replacement parts. Especially critical parts in the power circuit block should not be replaced with other makes. Critical parts are marked with ⚠ in the schematic diagram and circuit board diagram.
2. Before returning a repaired unit to the customer, the service technician must thoroughly test the unit to ascertain that it is completely safe to operate without danger of electrical shock.

SPECIFICATIONS

General Section

Semiconductors:	ICs: 7 Transistors: 17 Diodes: 15 LEDs: 9
Power Supply:	AC: 110–127V/200–220V/ 230–250V, 50/60Hz DC: 12V (IEC R20 x 8 or equivalent) Car: Use car battery adaptor
Power Consumption:	18W
Power Output:	20W P.M.P. (AC operation) 4W/CH (T.H.D. 10% DC)
Speakers :	Woofer: 12cm, 3.2 ohms x 2 Tweeter: 2cm, 300 ohms x 2
Dimentions:	589(W)x240(H)x143(D)mm
Weight:	6.5kg (with batteries)

Radio Section

Circuit System:	FM/SW_2/SW_1/MW Super- heterodyne
Tuning Range:	FM: 88 to 108MHz SW_2: 7 to 22MHz SW_1: 2.3 to 7MHz MW: 530 to 1,605kHz
Intermediate Frequency:	FM: 10.7MHz AM: 455kHz
Sensitivity:	FM: 11dB (pra.), 3dB (max.) SW_2: 30dB (pra.), 27dB (max.) SW_1: 47dB (pra.), 38dB (max.) MW: 47dB (pra.), 37dB (max.)
Antennas(Aerials):	FM/SW_2: Telescopic antenna MW/SW_1: Built-in ferrite core antenna

Tape Recorder Section

Tape:	Cassette tape (C-30,60,90)
Track System:	4 track 2 channel stereo
Recording System:	AC bias, 55kHz
Erasing System:	Quasi AC erase
Frequency Response:	Metal: 60 to 12,000Hz CrO_2: 60 to 11,000Hz Normal: 60 to 10,000Hz
Signal to Noise Ratio:	45dB
Wow and Flutter:	0.2% (WRMS)
Crosstalk:	Between tracks: 65dB Between channels: 40dB
Input Sensitivity and Impedance:	Mic: 0.6mV, 1.2k ohms Line-in: 500mV, 680k ohms
Output Level and Load Impedance:	Line-out: 700mV, 2k ohms Headphone: 8 ohms–2k ohms Ext. speaker: 3.2 ohms
Distortion:	3%
Erasing Ratio:	60dB
Fast Forwarding or Rewinding time:	105sec (using C-60)
Motor:	DC micromotor
Heads:	Permalloy

DISASSEMBLY

1. Cassette lids (TAPE 1 and TAPE 2) removal

1) **Open cassette lid (TAPE 1) to remove the spring shown in Fig. 1.**
2) Insert a (—) screwdriver between the cassette lid and the front case and pull the cassette lid toward you while pressing the screwdriver to outside.
   Fig. 2 shows the right side of the cassette lid. Perform same procedure for the left side.
3) Insert a (—) screwdriver between the cassette lid and the mechanism chassis, press it in the direction of the arrow to remove the projection of the cassette lid. (Fig. 3). Then, the cassette lid can be removed.
4) Remove cassette lid (TAPE 2) in the same way.

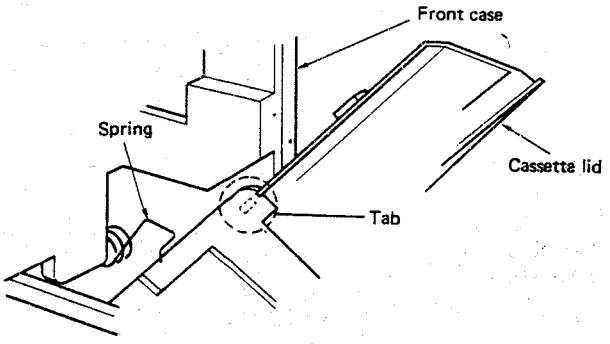


Fig. 1

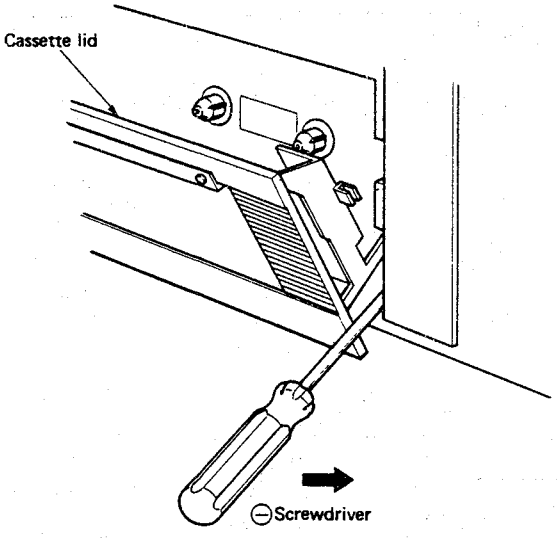


Fig. 2

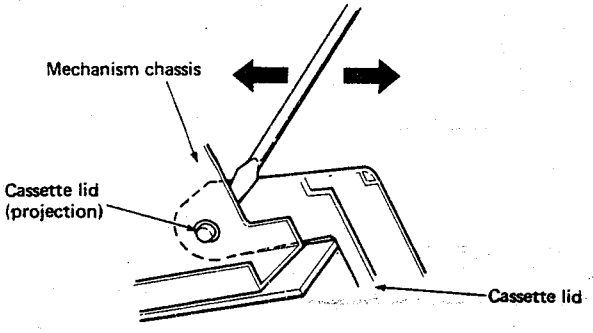


Fig. 3

2. Rear case removal

1) Remove the battery lid.
2) The rear case can be removed by removing 7 screws (A) shown in Fig. 4.
   Remove Pin connectors P102, P103 of the main PC Board at that time.

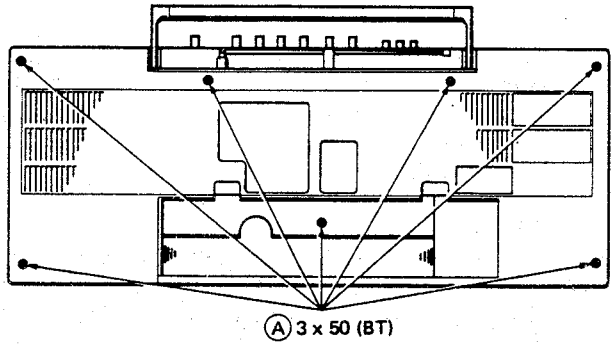


Fig. 4

3. Main and Switch PC Board removal (Fig. 5)

1) Pull out the BAND lever knob and FUNCTION, MIC/SP, SPSS, LOUDNESS, FM MODE, TAPE knobs.
2) Remove 5 main PC Board fixing screw (B), (C) shown in Fig. 5.
3) The switch PC Board is removed simultaneously when the main PC Board is removed from the front case.

4. Volume PC Board removal (Fig. 5)

1) Pull out the TONE, VOLUME L/R knobs.
2) Pull out the volume PC Board from the front case guide which fixes the volume PC Board.

5. Mixing volume PC Board removal (Fig. 5)

1) Pull out the mixing volume knob.
2) The mixing volume PC Board can be removed by removing the fixing screw (D) shown in Fig. 5

6. Jack PC Board removal (Fig. 5)

When the jack PC Board is turned to the left, locking is released and jack PC Board can be removed.

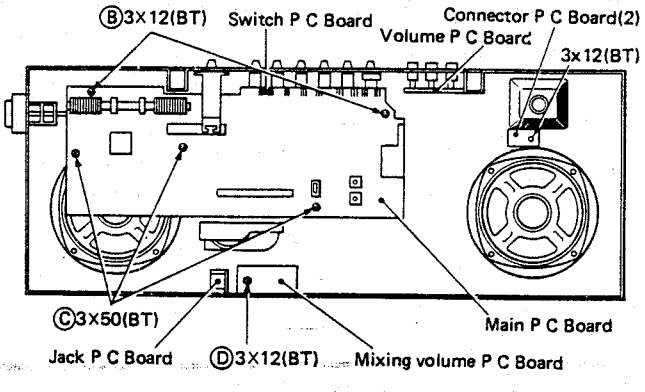


Fig. 5

7. Level indicator PC Board removal (Fig. 6)
The indicator PC Board can be removed by removing 2 fixing screws (E) shown in Fig. 6.

8. Stereo indicator PC Board removal (Fig. 6)
Open the stopper fixing the stereo indicator PC Board to remove the PC Board.

9. Cassette mechanism (TAPE 1 and 2) removal (Fig. 6)
The cassette mechanism (TAPE 1 and 2) are removed while they are assembled together by removing 6 screws (F) shown in Fig. 6.

10. POWER PC Board removal (Fig. 7)
Remove 2 screws (G) shown in Fig. 7 and pull out the power PC Board toward the front.

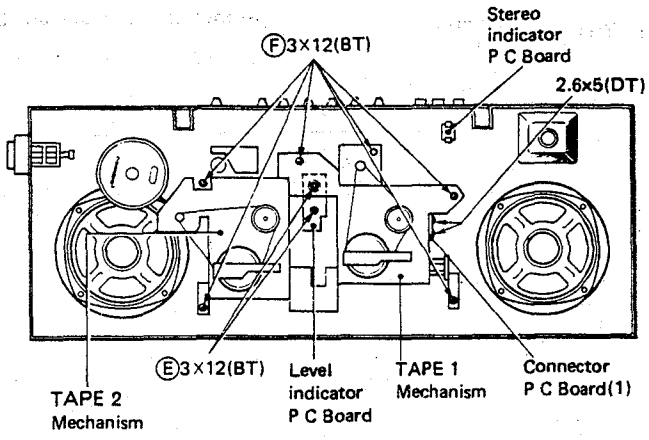


Fig. 6

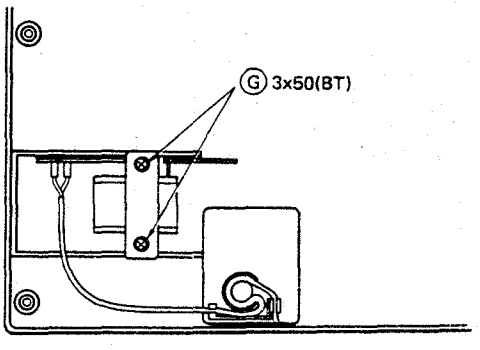
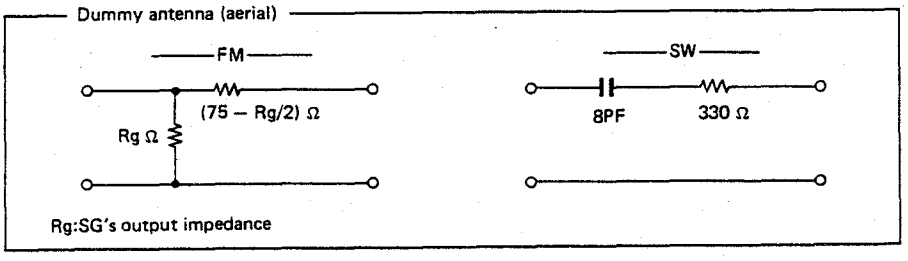


Fig. 7

ADJUSTMENT

1. Radio Section



Step		Adjustment Item	Measuring Instrument and Connection			Genescope or Signal Generator Frequency	Dial Pointer Position	Adjust	Reading
			Measuring Instrument	Input Terminal	Output Terminal				
1	(1)	FM IF	Turn T202 fully counterclockwise.						
	(1)	FM IF	• Genescope (10.7 MHz)	TP102	TP201	10.7 MHz	Highest	T101	Note 1
	(2)	S-Curve						T202	Note 2
2	(1)	FM OSC. (Covering)	• FM signal generator (400 Hz, 30% mod.) • Oscilloscope • VTVM	TP101 (thru FM dummy antenna)	Speaker terminals (3.2Ω load)	87 MHz	Lowest	L102	Max.
	(2)					109 MHz	Highest	CT102	
	(3)					Repeat steps (1) and (2)			
3	(1)	FM ANT. (Tracking)				90 MHz	90 MHz	L101	Max.
	(2)					106 MHz	106 MHz	CT101	
	(3)					Repeat steps (1) and (2)			
4	(1)	FM MPX (Multiplex)	• Frequency counter	Connect a 10μF 25V electrolytic capacitor between the No. 1 pin of IC301 and ground	TP301	–	–	RT301	38 kHz ±50 Hz (Note 3)
5	(1)	AM IF	• Genescope (455 kHz)	Ferrite-core antenna (thru loop antenna)	TP201	455 kHz	Highest	T201 T203	Note 4
	(2)					Repeat step (1)			
6	(1)	MW OSC. (Covering)	• AM signal generator (400 Hz, 30% mod.) • VTVM	Ferrite-core antenna (thru loop antenna)	Speaker terminals (3.2Ω load)	515 kHz	Lowest	L156	Max.
	(2)					1,650 kHz	Highest	CT156	
	(3)					Repeat steps (1) and (2)			
7	(1)	MW ANT. (Tracking)				600 kHz	600 kHz	L152	Max.
	(2)					1,400 kHz	1,400 kHz	CT153	
	(3)					Repeat steps (1) and (2)			
8	(1)	SW 1 OSC. (Covering)	• AM signal generator (400 Hz, 30% mod.) • VTVM	Ferrite-core antenna (thru loop antenna)	Speaker terminals (3.2Ω load)	2.2MHz	Lowest	L155	Max.
	(2)					7.3 MHz	Highest	CT155	
	(3)					Repeat steps (1) and (2)			
9	(1)	SW 1 ANT. (Tracking)				2.7 MHz	2.7 MHz	L153	Max.
	(2)					6.3 MHz	6.3 MHz	CT152	
	(3)					Repeat steps (1) and (2)			
10	(1)	SW 2 OSC. (Covering)	• AM signal generator (400 Hz, 30% mod.) • VTVM	TP101 (thru SW dummy antenna)	Speaker terminals (3.2Ω load)	6.7 MHz	Lowest	L154	Max.
	(2)					23 MHz	Highest	CT154	
	(3)					Repeat steps (1) and (2)			
11	(1)	SW 2 ANT. (Tracking)				8 MHz	8 MHz	L151	Max.
	(2)					20 MHz	20 MHz	CT151	
	(3)					Repeat steps (1) and (2)			

Note:

1. Feed in a weak signal to TP102 from the genescope. Adjust T101 for maximum gain and the waveform indicated in Fig. 8. If the center of the waveform cannot be lined up on the marker, adjust the right/left balance.

Adjust the genescope output so that there is a little noise riding on the leading edge.

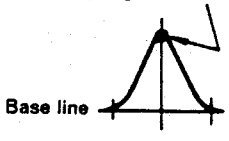


Fig. 8

2. Use the T202 core to form the S-curve shown in Figure 9. Adjust the symmetry of A and B about point C for linearity.

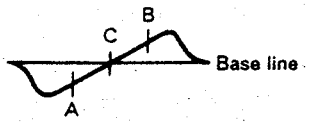
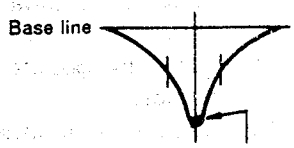


Fig. 9

3. Connect the frequency counter to TP301 and connect a 220kΩ resistor parallel with the frequency counter.
4. Feed in a weak signal from the genescope. Adjust T201, T203 for maximum gain and the waveform of Figure 10.



Adjust the genescope output so that there is a little noise riding on the leading edge.

Fig. 10

2. Tape Recorder Section

Perform the following adjustments in the sequence stated after cleaning the heads, pressure roller, and capstan with a head cleaning stick moistened in alcohol.

Step	Adjustment Item	Measuring Instrument and connection			Check Tape	Mode	Adjusted Position	Adjusted Value	Remarks
		Measuring Instrument	Input Terminal	Output Terminal					
1	Head azimuth	• VTVM	—	Speaker terminal (3.2Ω load)	Head azimuth test tape (10 kHz)	Playback	Azimuth adjusting screw	Output Max.	Note 1

Note:

1. When the maximum values of both channels are different, adjust to the maximum value of the L channel. In this case, the difference between the maximum values of both channels should be within 2 dB.

ADJUSTMENT PARTS LOCATION

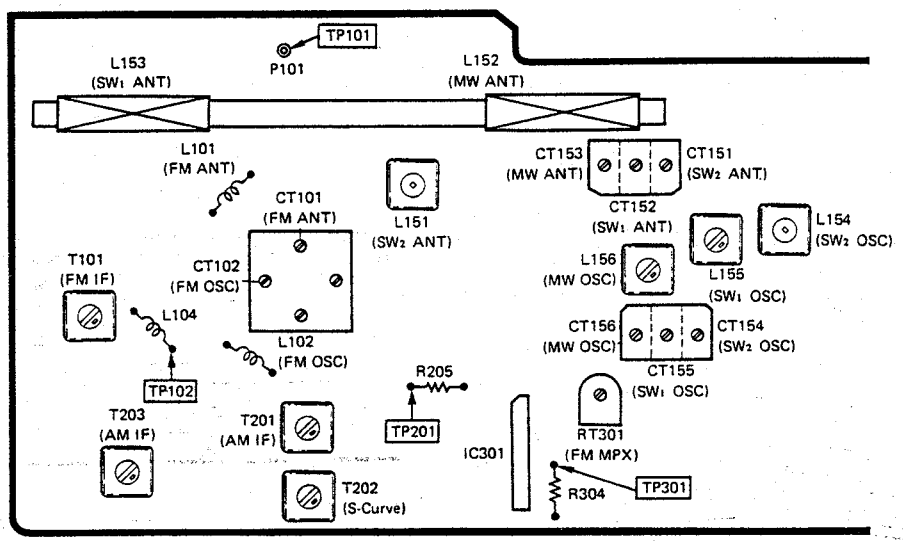


Fig. 11

INSPECTION OF MECHANISM

Item	Checking item		Reference value	Remarks
1	Pressure of pressure roller		300 – 550 g	Note 1
2	Take-up torque		35 – 75 g.cm	
3	Fast forward/Rewind torque		70 – 160 g.cm	TAPE 2
			90 – 150 g.cm	TAPE 1
4	Auto-Stop sensor operation force		40 – 75 g	
5	Brake torque		15 g.cm or more	Measured in stop mode
6	Back tension torque	Take-up	2 – 6.5 g.cm	TAPE 2
			1 – 6 g.cm	TAPE 1
		Supply	1 – 6 g.cm	
7	Flywheel thrust gap		0.05 – 0.3 mm	
8	Button operation force	Play button	0.5 kg or less	
		FF/CUE button	0.7 kg or less	
		Rewind/Rev button	0.9 kg or less	
		Eject button	0.4 kg or less	
		Record button	0.6 kg or less	
		Pause button	0.7 kg or less	

Note:

1. Set this unit in the playback mode and press the pressure roller in the direction of the arrow using a fan type tension gauge, and measure the pressure when the pressure roller is released from the capstan.

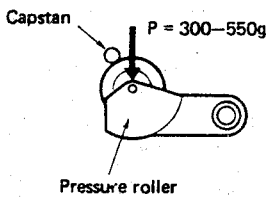


Fig. 12

LUBRICATION

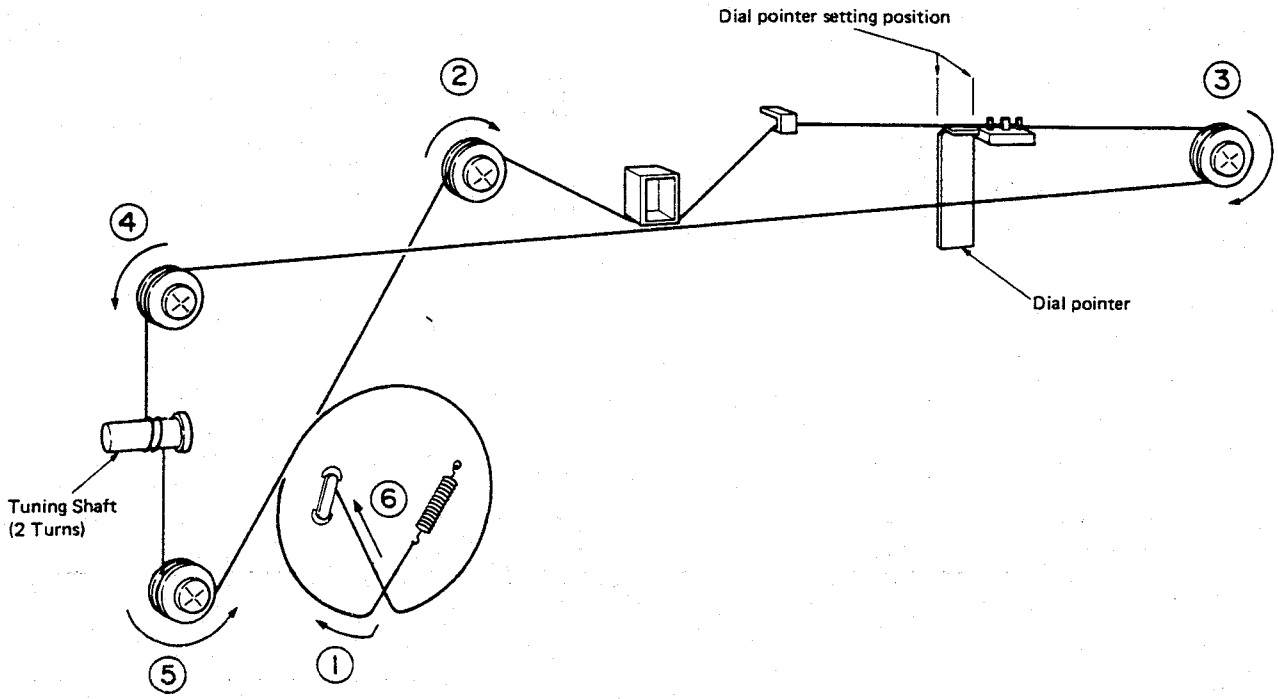
Lubricate one or two drops of oil to rotating point or lubricate grease to sliding point.
Lubricate the respective parts listed once every 1000 hours or once a year under normal conditions of use.
Avoid oiling them excessively, or rotation may become irregular because of oil splashes.

Lubrication point		Oil or Grease
Rotary section	Metal and metal	Pan motor oil (10W-40)
	Mold and metal	Sonic slider oil (#1600)
Sliding section	Metal and metal	Hitasol (MO-138)
	Mold and mold Mold and metal	White grease (FL-LUBE-A)
Spring resonance prevention		Floil (GB-TS-1)

DIAL CORD STRINGING

Stringing method

- String the dial cord to each rollers according to the order from ① to ⑥ after turned the pulley to the end of clockwise direction.



Note:

1. Voltage measured at base of chassis with minimum volume control and no signal.
2. Nomenclature of Resistors and Capacitors.

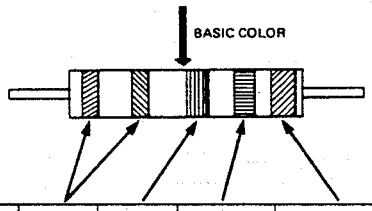
R101 150 RS 1 K	Circuit No.	
	Value	No indicated Ω (Ohm) M : 1000 kΩ
	Tolerance	No indicated ±5% K : ±10% M : ±20%
	Wattage	No indicated 1/4 W
	Sort	No indicated Carbon film RC: Composition RW: Wire wound RS: Oxide metal film RN: Fixed metal film

C101 0.001 M	Circuit No.	
	Value	No indicated μF P : PF
	Tolerance	No indicated ±10% J : ± 5% M: ±20% Z: +80%, −20% D: ±0.5PF C: ±0.25pF
	Sort	Ceramic
		Electrolitic
		Mylar
		Polyester
		Styrol
C102 0.1/16	Voltage	No indicated 50WV

3. Be sure to make your orders of resistors and capacitors with value, voltage, tolerance and sort.
4. When replacing capacitors marked with *, use specified ones stated on parts list since required temperature characteristics.

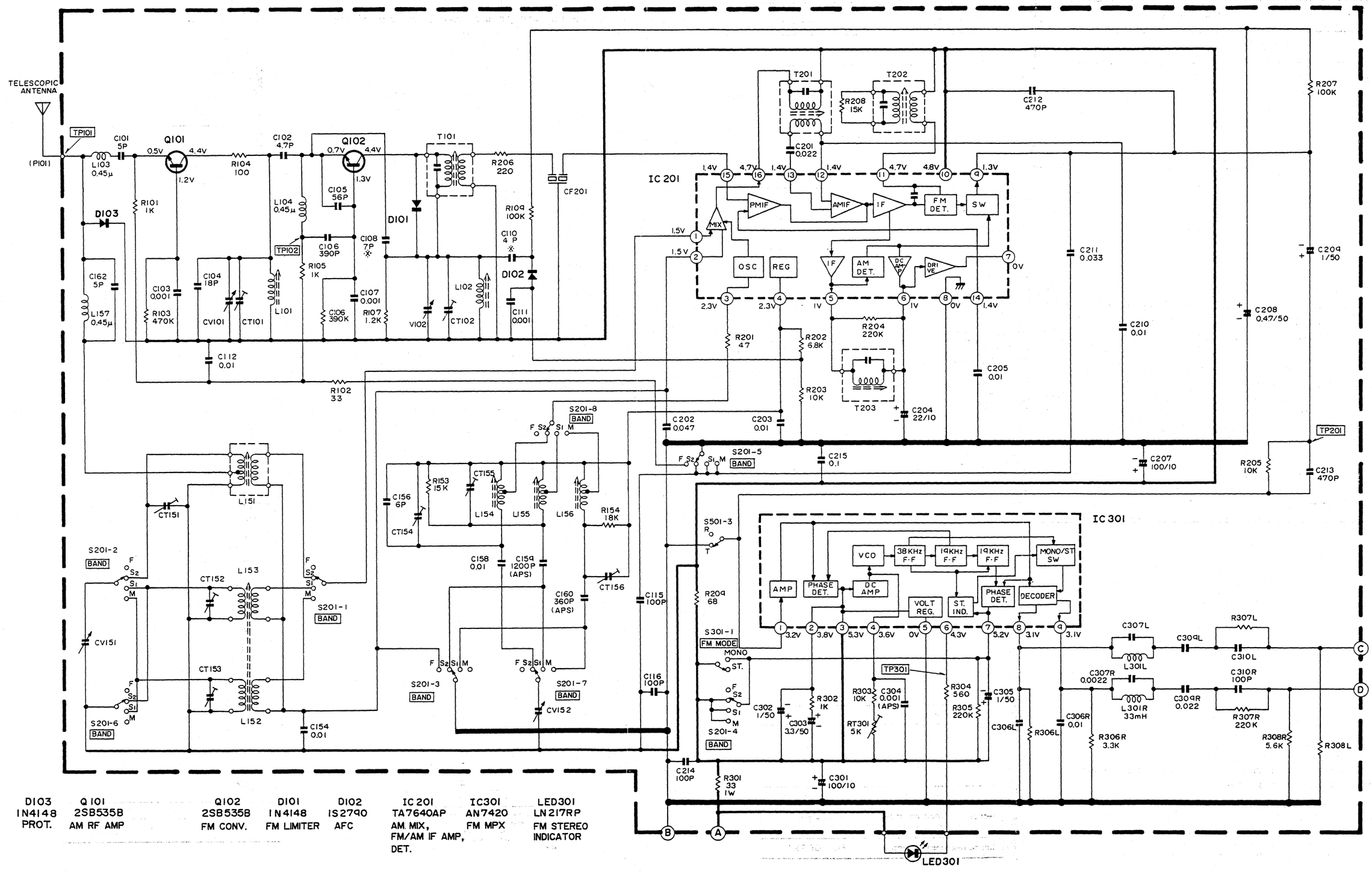
HOW TO READ CAPACITY OF RESISTOR SHAPE CAPACITORS

COLOR	RATED VOLTAGE
Pink	25V
Light green	50V



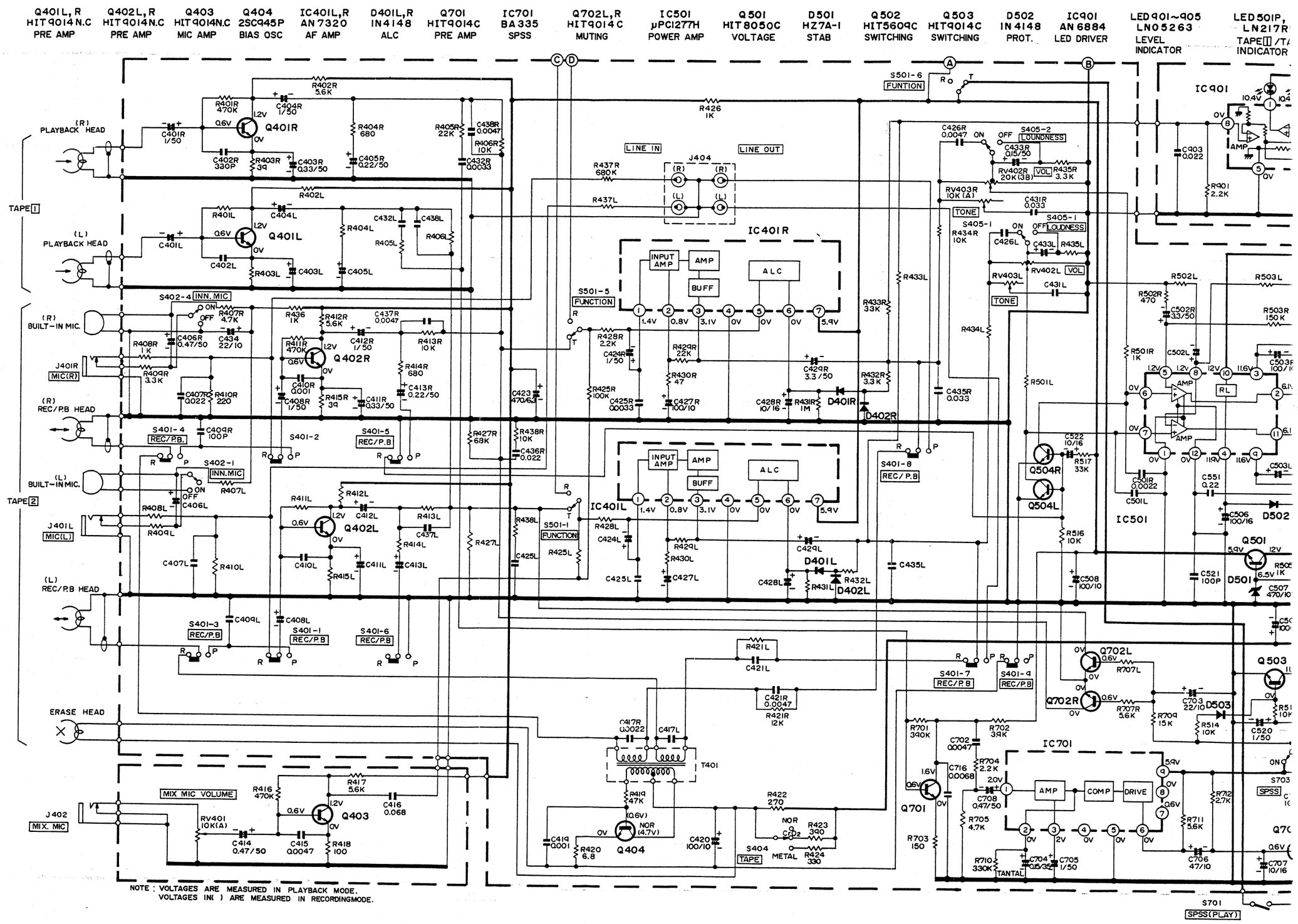
COLOR	CAPACITY	MULTIPLE	TOLERANCE	CHARACTERISTICS
Black	0	10^0	±20%	For temperature compensation
Brown	1	10^1		
Red	2	10^2		
Orange	3	10^3		
Yellow	4	10^4		
Green	5	10^5		
Blue	6			
Violet	7			
Grey	8		+30%	High dielectric constant type
White	9			For temperature compensation
Gold		10^{-1}	± 5%	
Silver			±10%	High dielectric constant type

SCHEMATIC DIAGRAM (Radio Section)

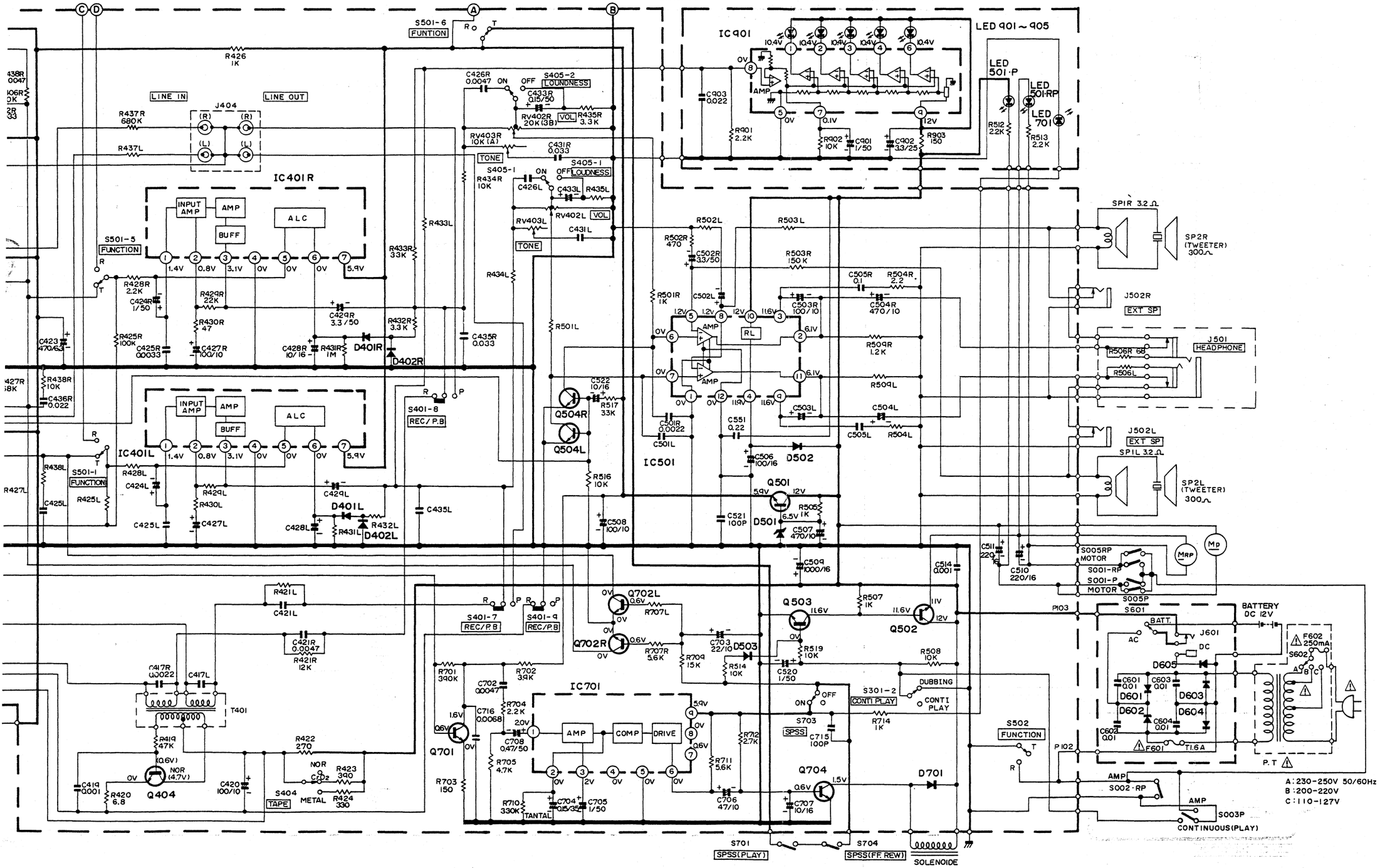


D103	Q101	Q102	D101	D102	IC201	IC301	LED301
1N4148 PROT.	2SB535B AM RF AMP	2SB535B FM CONV.	1N4148 FM LIMITER	1S2790 AFC	TA7640AP AM MIX, FM/AM IF AMP, DET.	AN7420 FM MPX	LN217RP FM STEREO INDICATOR

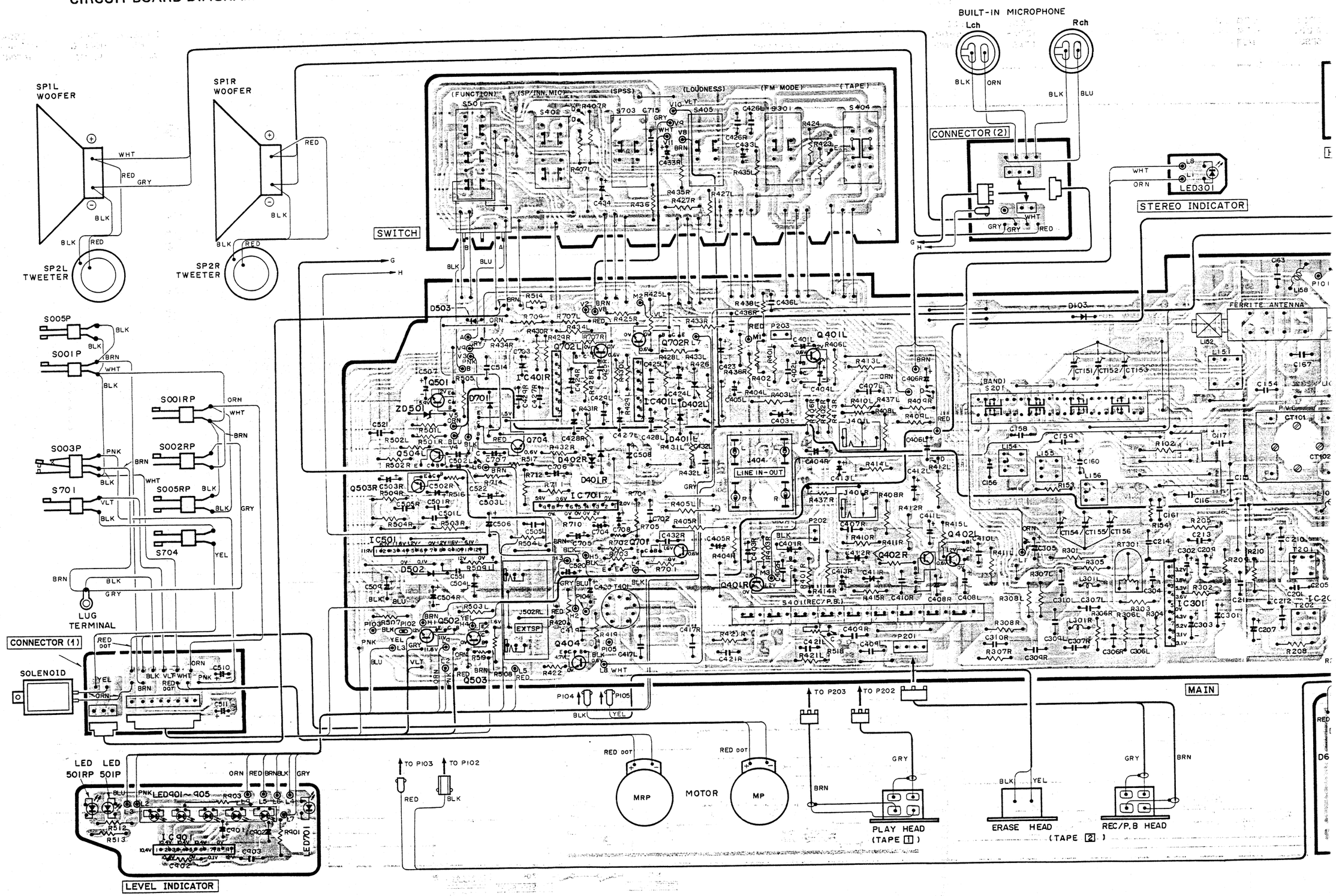
SCHEMATIC DIAGRAM (Tape/Audio Section)



IC701 BA335 SPSS | Q702L,R HIT9014C MUTING | IC501 μPC1277H POWER AMP | Q501 HIT8050C VOLTAGE | D501 HZ7A-1 STAB | Q502 HIT5609C SWITCHING | Q503 HIT9014C SWITCHING | D502 IN4148 PROT. | IC901 AN6884 LED DRIVER | LED901~905 LN05263 LEVEL INDICATOR | LED501P, RP LN217RP TAPE[1]/TAPE[2] INDICATOR | LED701 LN217RP SPSS INDICATOR | Q704 HIT8050C SWITCHING | D701 IN4148 PROT. | D601~604 IN4001 RECT. | D605 IN4001 PROT. | D402L,R IS188 ALC | D503 IN4148 PAUSE | Q504L,R HIT9014C MUTING



CIRCUIT BOARD DIAGRAM



BUILT-IN MICROPHONE
Lch
Rch
BLK ORN
BLK BLU
CONNECTOR (2)
WHT
ORN
LED301
STEREO INDICATOR
HEADPHONE JACK
MIXING VOLUME
(TONE)
(VOLUME)
VOLUME
BATTERY TERMINAL
BLK
RED
POWER TRANSFORMER
POWER CORD
MAIN
TO P203
TO P202
RED DOT
MRP
MOTOR
MP
GRY
BRN
PLAY HEAD
(TAPE 1)
BLK YEL
ERASE HEAD
REC/P.B HEAD
(TAPE 2)
TO P102
POWER
VOLTAGE SELECTOR

REPLACEMENT PARTS LIST

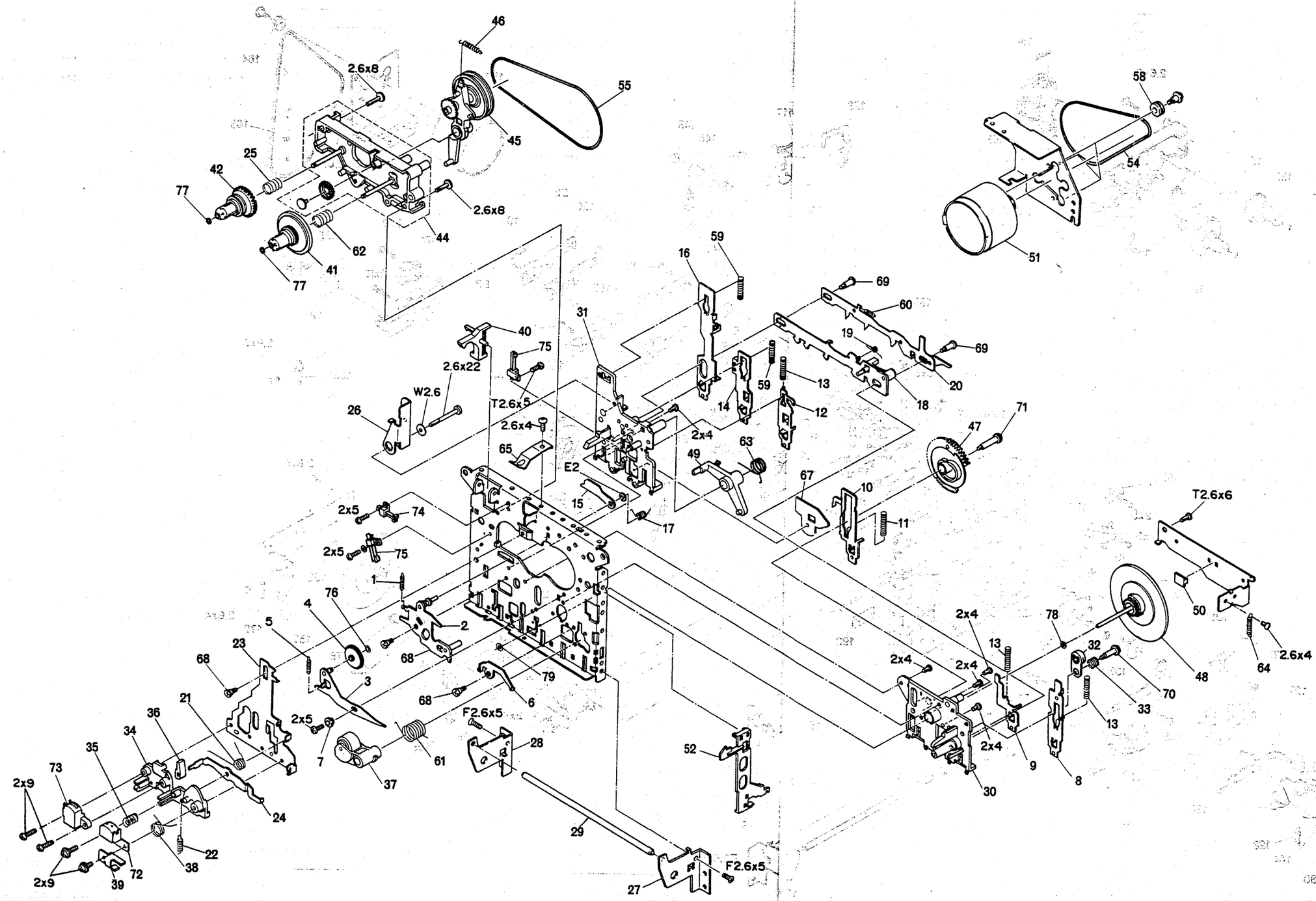
SYMBOL-NO	P-NO	DESCRIPTION
		CAPACITORS
CT151-156	0283565	VARIABLE CAPACITOR
C102	0208125	CERAMIC (RESISTOR SHAPE) 4.7PF+-5%
C108	0248477	CERAMIC DISCAL CAPACITOR 7PF 0.5PF
C704	0256361	TANTALUM ELECTROLYTIC 0.15MF+-10%,35V
CT101, 102 CV101, 102	5052682	VARIABLE CAPACITOR
		RESISTORS
RT301	5007682	SEMI VARIABLE 5KOHM
RV401	5001091	VARIABLE RESISTOR 10KOHM(A)
RV402LR	5020172	VARIABLE RESISTOR 20KOHM(3B)
RV403LR	5020181	VARIABLE RESISTOR 10KOHM(A)
		SEMI-CONDUCTORS
D101	5331852	DIODE 1N4148
D102	5330661	DIODE SILICON 1S2790
D103	5331852	DIODE 1N4148
D401LR	5331852	DIODE 1N4148
D402LR	5331902	DIODE 1S188(FM)
D501	5330317	ZENNER DIODE HZ7A-1
D502	5331852	DIODE 1N4148
D503	5331851	DIODE 1N4148
D601-605	5331992	DIODE 1N4001
D701	5331852	DIODE 1N4148
IC201	5368011	IC TA7640AP
IC301	5369941	IC AN7420
IC401LR	5369931	IC AN7320
IC501	5352971	IC UPC1277H
IC701	5352033	IC BA335
IC901	5355471	IC AN6884
LED301	5380593	LED LN217RP
LED501P	5380593	LED LN217RP
LED501RP	5380593	LED LN217RP
LED701	5380593	LED LN217RP
LED901-905	5380951	LED LNO5263P
Q101-102	0573510	TRANSISTOR 2SC535B
Q401LR	5322591	TRANSISTOR HIT9014N-C
Q402LR	5322591	TRANSISTOR HIT9014N-C
Q403	5322591	TRANSISTOR HIT9014N-C
Q404	5320813	TRANSISTOR 2SC945P
Q501	5322522	TRANSISTOR HIT8050C
Q502	5322542	TRANSISTOR HIT5609C
Q503	5322581	TRANSISTOR HIT9014C
Q504LR	5322581	TRANSISTOR HIT9014C
Q701	5322581	TRANSISTOR HIT9014C
Q702LR	5322581	TRANSISTOR HIT9014C
Q704	5322522	TRANSISTOR HIT8050C
		TRANSFORMERS
⚠ PT	5213453	POWER TRANSFORMER
T101	5148162	FM IF TRANSFORMER
T201	5132222	AM IF TRANSFORMER
T202	5148164	FM IF TRANSFORMER
T203	5132221	AM IF TRANSFORMER
T401	5260481	OSCILLATOR COIL
		COILS
L101	5127083	FM RF COIL
L102	5127081	FM OSCILLATOR COIL
L103-104	5127084	CHOKE COIL
L151	5124023	SW ANTENNA COIL
L152-153	5110551	FERRITE ANTENNA
L154	5124032	SW_2 OSCILLATOR COIL
L155	5120883	SW_1 OSCILLATOR COIL
L156	5120881	MW OSCILLATOR COIL
L158	5127084	CHOKE COIL
L301LR	5152451	TRAP COIL
		MISCELLANEOUS
⚠	5746314	POWER CORD
CF201	5160211	CERAMIC FILTER CF107A
⚠ F601	5721374	FUSE 1.6A
⚠ F602	5721472	FUSE 250MA
J401LR	5673241	JACK-3.5MMD (MIC)
J402	5673241	JACK-3.5MMD (MIX. MIC)
J404	5676351	4P PIN JACK (LINE IN/OUT)
J501	5674245	HEADPHONE JACK
J502LR	5676201	2P PIN JACK (EXT. SP.)
J601	5671262	DC JACK
S201	5620662	SLIDE SWITCH (BAND)
S301	5604601	LEVER SWITCH (FM MODE/CONTI PLAY)
S401	5622471	SLIDE SWITCH (REC/P.B.)
S402	5604603	LEVER SWITCH (INNER MIC/SPEAKER)
S404	5604602	LEVER SWITCH (TAPE)
S405	5604601	LEVER SWITCH (LOUDNESS)
S501	5604604	LEVER SWITCH (FUNCTION)
S502	5601224	MICRO SWITCH (FUNCTION)
S601	5622341	SLIDE SWITCH (AC/BATT.)
⚠ S602	5605251	ROTARY SWITCH (VOLTAGE SELECTOR)
S703	5604601	LEVER SWITCH (SPSS)
		FOR ACCESSARIES
⚠	5660212	SIEMENS PLUG

REPLACEMENT PARTS LIST

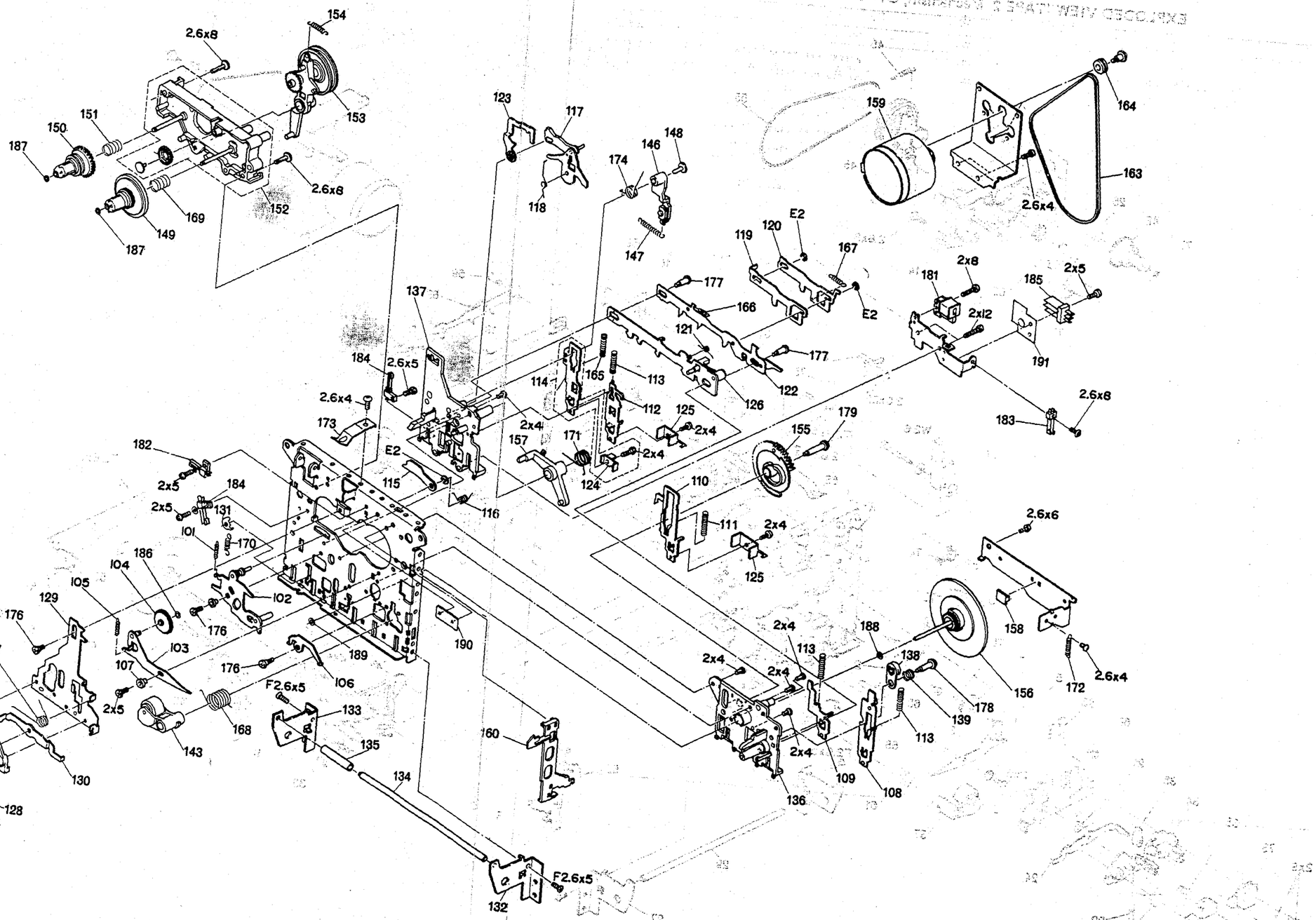
GT-50FA chassis (TAPE 2)

SYMBOL-NO	P-NO	DESCRIPTION
1	6544141	SHIFT ARM SPRING
2	7359271	SHIFT ARM ASSEMBLY
3	7359211	IDLER ARM ASSEMBLY
4	6778041	PLAY IDLER
5	6544181	IDLER SPRING
6	7359111	PAUSE ARM
7	7570841	COLLAR
8	7359121	PAUSE LEVER ASSEMBLY
9	7359141	STOP LEVER
10	7359151	FF LEVER
11	6521671	FF LEVER SPRING
12	7359161	REWIND LEVER
13	6521661	REWIND LEVER SPRING
14	7359171	PLAY LEVER
15	7359222	REC LEVER (BH)
16	7359251	REC LEVER
17	6549431	REC LEVER SPRING
18	7359101	LOCK CAM (A) ASSEMBLY
19	6549491	AUTO ARM SPRING
20	7359061	LOCK CAM (B) ASSEMBLY
21	6549481	HEAD PLATE SPRING
22	6544161	HEAD PLATE SPRING
23	7359301	HEAD PLATE
24	7359041	AUTO STOP ARM
25	6521642	BACK TENSION SPRING
26	7359021	REC ARM
27	7358991	BUTTON HOLDER (R)
28	7358981	BUTTON HOLDER (L)
29	4500021	BUTTON SHAFT
30	6777841	LEVER HOLDER (A) ASSEMBLY
31	6778011	LEVER HOLDER (B)
32	6777991	PAUSE CAM
33	6521681	PAUSE CAM SPRING
34	6777981	HEAD BASE
35	6521682	HEAD SPRING
36	6777861	SENSOR CAP
37	6344701	PRESSURE ROLLER ASSEMBLY
38	6549501	PRESSURE ROLLER SPRING
39	7360431	PRESSURE ROLLER SPRING HOLDER
40	6777971	REC SENSOR
41	6414951	TAKE-UP REEL ASSEMBLY
42	6414961	SUPPLY REEL ASSEMBLY
43	6521642	TENSION ARM
44	6777941	REEL BASE ASSEMBLY
45	6777901	CLUTCH ARM ASSEMBLY
46	6544292	CLUTCH ARM SPRING
47	6433451	GEAR
48	6374651	FLYWHEEL ASSEMBLY
49	6777831	LOCK ARM
50	6777821	CAPSTAN SPACER
51	5577912	DC MOTOR ASSEMBLY
52	6777811	EJECT LEVER
53	6777961	BUTTON LEVER
54	6356041	BELT
55	6356031	BELT
56	5559401	COUNTER
57	6355262	COUNTER BELT
58	6587211	MOTOR CUSHION
59	6521651	LEVER SPRING
60	6544171	CAM SPRING
61	6549471	PRESSURE ROLLER SPRING (B)
62	6521641	BACK TENSION SPRING
63	6549451	LOCK ARM SPRING
64	6544151	EJECT LEVER SPRING
65	6537241	CASSETTE HOLDER SPRING
66	7789011	HEAD SPACER (FOR HEAD HEIGHT ADJUSTMENT)
67	7360351	INTER LOCK ARM
68	7783501	SCREW
69	7783511	SCREW
70	7783521	SCREW
71	7783531	SCREW
72	5449121	RECORD/PLAYBACK HEAD
73	5445371	ERASE HEAD
74	5603791	LEAF SWITCH(AMP.)
75	5603801	LEAF SWITCH(MOTOR)
76	7787695	POLYSLIDER WASHER
77	7787711	POLY SLIDER WASHER
78	7787692	POLY SLIDER WASHER
79	7768234	NYLON WASHER

EXPLODED VIEW (TAPE 2 Mechanism, GT–50FA)



EXPLODED VIEW (TAPE 1 Mechanism, GT–50FB)



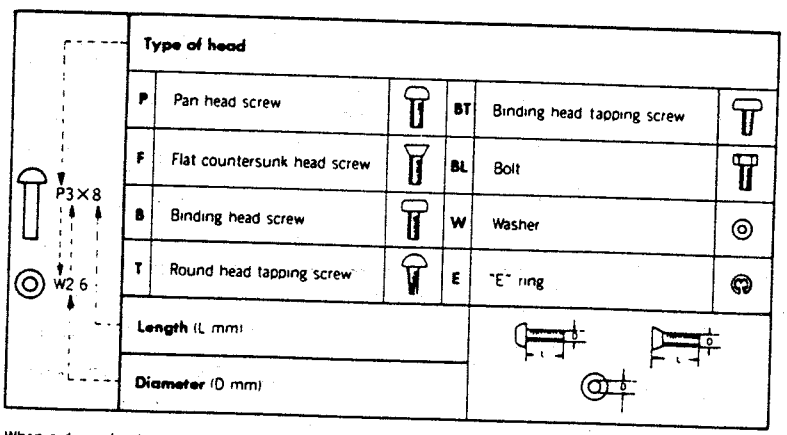
REPLACEMENT PARTS LIST

GT-50FB chassis (TAPE 2)

SYMBOL-NO	P-NO	DESCRIPTION
101	6544141	SHIFT ARM SPRING
102	7359271	SHIFT ARM ASSEMBLY
103	7359211	IDLER ARM ASSEMBLY
104	6778041	PLAY IDLER
105	6544181	IDLER SPRING
106	7359111	PAUSE ARM
107	7570841	COLLAR
108	7359121	PAUSE LEVER ASSEMBLY
109	7359141	STOP LEVER
110	7359151	FF LEVER
111	6521671	FF LEVER SPRING
112	7359161	REWIND LEVER
113	6521661	REWIND LEVER SPRING
114	7359191	PLAY LEVER ASSEMBLY
115	7359221	REC LEVER (B)
116	6549431	REC LEVER SPRING
117	7359281	REVIEW/CUE ARM ASSEMBLY
118	6549421	REVIEW/CUE ARM SPRING
119	7359231	LOCK CAM (S)
120	7359241	LOCK CAM (R)
121	6549491	AUTO ARM SPRING
122	7359051	LOCK CAM (B) ASSEMBLY
123	7359071	TRIGGER ARM
124	7359081	PLAY SWITCH LEVER
125	7360441	SWITCH LEVER (FR)
126	7359091	LOCK CAM (C) ASSEMBLY
127	6549481	HEAD PLATE SPRING
128	6544161	HEAD PLATE SPRING
129	7359301	HEAD PLATE
130	7359041	AUTO STOP ARM
131	7358951	REVIEW/CUE LOCK ARM (N) ASSEMBLY
132	7358991	BUTTON HOLDER (R)
133	7358981	BUTTON HOLDER (L)
134	4500021	BUTTON SHAFT
135	7570761	BUTTON COLLAR
136	6777841	LEVER HOLDER (A) ASSEMBLY
137	6778011	LEVER HOLDER (B)
138	6777991	PAUSE CAM
139	6521681	PAUSE CAM SPRING
140	6777981	HEAD BASE
141	6521682	HEAD SPRING
142	6777861	SENSOR CAP
143	6344701	PRESSURE ROLLER ASSEMBLY
144	6549501	PRESSURE ROLLER SPRING
145	7360431	PRESSURE ROLLER SPRING HOLDER
146	6777871	SOLENOID ARM
147	6544281	SOLENOID ARM SPRING
148	6778051	BUSH
149	6414951	TAKE-UP REEL ASSEMBLY
150	6414961	SUPPLY REEL ASSEMBLY
151	6521642	TENSION ARM SPRING
152	6777941	REEL BASE ASSEMBLY
153	6777901	CLUTCH ARM ASSEMBLY
154	6544291	CLUTCH ARM SPRING
155	6433451	GEAR
156	6374641	FLYWHEEL ASSEMBLY
157	6777831	LOCK ARM
158	6777821	CAPSTAN SPACER
159	5577911	DC MOTOR ASSEMBLY
160	6777811	EJECT LEVER
161	6777961	BUTTON LEVER
162	6777801	TAPE GUIDE
163	6356011	BELT
164	6587211	MOTOR CUSHION
165	6521651	LEVER SPRING
166	6544171	CAM SPRING
167	6544172	S CAM SPRING
168	6549471	PRESSURE ROLLER SPRING (B)
169	6521641	BACK TENSION SPRING
170	6544152	FF GEAR SPRING
171	6549451	LOCK ARM SPRING
172	6544151	EJECT LEVER SPRING
173	6537241	CASSETTE HOLDER SPRING
174	6549441	TRIGGER ARM SPRING
175	7789011	HEAD SPACER (FOR HEAD HEIGHT ADJUSTMENT)
176	7783501	SCREW
177	7783511	SCREW
178	7783521	SCREW
179	7783531	SCREW
180	5449121	PLAYBACK HEAD
181	5644251	SOLENOID
182	5603771	LEAF SWITCH(SPSS PLAY)
183	5603781	LEAF SWITCH(FF/REW)
184	5603801	LEAF SWITCH(MOTOR)
185	5603761	LEAF SWITCH(CONTI, PLAY)
186	7787695	POLYSLIDER WASHER
187	7787711	POLY SLIDER WASHER
188	7787692	POLY SLIDER WASHER
189	7768234	NYLON WASHER
190	7684691	SPACER
191	7684701	INSULATION SHEET

REPLACEMENT PARTS LIST

SYMBOL-NO	P-NO	DESCRIPTION
		MISCELLANEOUS
201	6055154	TUNING KNOB
202	6295741	SLIDE KNOB (VOLUME,TONE)
203	6295751	LEVER KNOB (FUNCTION, SPSS, SP./INNER MIC, LOUDNESS, MODE, TAPE, BAND)
204	6285861	KNOB (MIXING VOLUME)
205	7781148	BT SCREW-3MMDX50MM
206	6334563	HANDLE ASSEMBLY
207	6038137	FRONT CASE ASSEMBLY
208	6776721	SPEAKER GRILL
209	7581971	TUNING SHAFT
210	6344051	ROLLER
211	7564281	ROLLER PIN
212	0661058	8D ROLLER P
213	7777602	SPECIAL SCREW
214	6776521	PULLEY HOLDER
215	6398961	POINTER
216	6423251	PULLEY
217	6316231	SPRING M
218	6094591	CASSETTE LID (TAPE 1)
219	6094592	CASSETTE LID (TAPE 2)
220	6763963	GEAR DAMPER ASSEMBLY
221	7355181	EJECT SPRING ASSEMBLY
222	6776531	BAND LEVER
223	5406773	SPEAKER-12CM
224	7781133	BT SCREW-3MMD
225	5419074	SPEAKER-TWEETER
226	6570221	MICROPHONE HOLDER
227	5421501	BUILT-IN MICROPHONE
228	7741481	SPACER
229	8699412	BIND TAPPING SCREW-3MMDX12MM(BLACK)
230	7777947	BIND TAPPING SCREW-3MMDX50MM
231	6777141	PCB STUD
232	6038117	REAR CASE ASSEMBLY
233	6174791	BATTERY LID ASSEMBLY
234	6520871	BATTERY SPRING
235	0681129	SPRING A
236	7450344	BATTERY TERMINAL
237	5752711	TELESCOPIC ANTENNA
238	7355121	TELESCOPIC ANTENNA BRACKET
239	8744416	BIND SCREW-3MMDX16MM
240	7781148	BT SCREW-3MMDX50MM
241	6060661	BUTTON (PLAY)
242	6060671	BUTTON (F.F)
243	6060681	BUTTON (REWIND)
244	6060691	BUTTON (PAUSE)
245	6060701	BUTTON (STOP)
246	6060711	BUTTON (REC)
247	7355092	RECORD PLATE



When ordering hardware excluding stated on these lists, be sure to make your orders with type and size

EXPLODED VIEW (Cabinet)